

**A STABLE ENCAPSULANT FLUID CAPABLE OF UNDERGOING**  
**REVERSIBLE DIELS-ALDER POLYMERIZATION**

**ABSTRACT**

An encapsulant fluid is provided comprising a mixture of a diene-containing compound and a dienophilic compound. At least one of the diene-containing and the dienophilic compounds is protected so that the compounds do not substantially react with each other at room temperature. The diene-containing and the dienophilic compounds undergo a reversible Diels-Alder polymerization reaction at a polymerization temperature above room temperature to form a solid debondable polymeric encapsulant. Also provided are methods for forming slider assemblies and methods for patterning a slider surface using the encapsulant.